

REMARKS

Claims 1-31 were pending. In this Amendment, claims 1, 3, 4, 6-20, 23-26 and 28-31 have been amended, claims 2, 5 and 21 have been canceled, and new claims 32-42 have been added. Claims 1, 3, 4, 6-20 and 22-42 therefore remain pending for examination.

Objection to Claim 31

The Examiner objected to claim 31 because the word --that-- appeared to be missing from line 4 of that claim. Claim 31 has been amended in accordance with the Examiner's suggestion, and it is respectfully requested that the Examiner withdraw this objection.

Allowable Subject Matter – Claims 23 and 31

The Examiner indicated that claim 23 would be allowable if rewritten in independent form. Claim 23 has therefore been amended to include certain limitations of independent claim 20. It is respectfully submitted that amended independent claim 23 is now in condition for allowance.

The Examiner also indicated that claim 31 would be allowable if rewritten in independent form. Claim 31 has therefore been amended to include certain limitations of independent claim 20. It is respectfully submitted that amended independent claim 31 is now in condition for allowance.

Rejection of Claims 14 and 15 under 35 U.S.C. § 112

The Examiner also rejected claims 14 and 15 under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, the Examiner rejected the claims based on the use of the term “namely” as well as on the use of the term “preferably.” Claims 14 and 15 have been amended to obviate the Examiner's objections to the claim language. Withdrawal of the rejection of claims 14 and 15 is therefore requested.

Rejection of Claims 1, 3, 4, 6, 11, 12, 14-20, 22 and 24-29 under 35 U.S.C. § 103(a)

The Examiner rejected claims 1, 3, 4, 6, 11, 12, 14-20, 22 and 24-29 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 6,619,918, issued to Rebsdorf *et al.* ("Rebsdorf"), in view of U.S. patent no. 5,379,644, issued to Yanagida *et al.* ("Yanagida"). These rejections are respectfully traversed because Rebsdorf, alone or in combination with Yanagida, fails to disclose, teach or suggest all of the elements of the claims. *See* M.P.E.P. § 2143.03 (stating that all words in a claim must be considered in judging the patentability of that claim against the prior art). Applicant respectfully requests reconsideration of these claims in light of the following remarks.

Amended claim 1 recites, *inter alia*, "an electrical conductor laid over a length of the rotor blade, the electrical conductor beginning at the rotor blade connection, and extending in a longitudinal direction of the rotor blade to proximate the blade tip and back to the rotor blade connection." (Emphasis added.) The amendments to claim 1 find support throughout the originally filed specification, including in Figures 3-5. Although it is respectfully submitted that claim 1 as previously pending was also allowable over Rebsdorf and Yanagida, claim 1 has been amended for clarification purposes.

Rebsdorf, alone or in combination with Yanagida, fails to disclose, teach or suggest the claimed electrical conductor. The Examiner acknowledges that Rebsdorf "does not disclose [that] the electrical conductor is laid over the length of the blade." Office Action, p. 4. However, the Examiner then relies upon Yanagida to teach an electrical conductor extending over the length of an airfoil. *Id.* It is respectfully submitted that the strain gauge described by Yanagida does not in fact extend over the length of the airfoil and that the strain gauge described by Yanagida does not extend to proximate a blade tip and back.

In particular, as illustrated in Figure 13 of Yanagida, strain gauges 3 extend over only a fraction of a length of corresponding wing bodies 23. These strain gauges 3 do not begin at a rotor blade connection and extend to proximate a blade tip. Instead, as illustrated, these strain gauges 3 begin and end far short of the wing body connections and tips.

Furthermore, the strain gauges 3 of Yanagida include respective terminals 4 that may be connected to lead wires of a resistance detector. *See* Figure 13 *and* col. 11, ll. 40-43. As

illustrated in Figure 13, the strain gauges 3 do not extend to proximate a blade tip and back to a rotor blade connection. Instead, the strain gauges 3 extend in one direction only, with respective terminals 4 at innermost and outermost ends of the strain gauges 3 along the wing bodies 23.

In one embodiment, the Applicant's configuration for the electrical conductor may enable the detection of flexing over the length of the claimed rotor blade. *See, e.g.*, Substitute Specification, p. 7, ll. 5-13. In contrast, the strain gauges 3 of Yanagida extend over only a relatively small portion of respective wing bodies 23 and would be unable to detect strain over the lengths of those wing bodies 23. For example, the strain gauges 3 would be unable to detect strain occurring at the tips of the wing bodies 23.

For at least these reasons, it is respectfully submitted that the rejection of claim 1 over Rebsdorf and Yanagida should be withdrawn.

Amended independent claim 14 recites, *inter alia*, "generating a pulse signal at a first end of [a] conductor; receiving the pulse signal via the conductor at a second end of the conductor; generating an additional pulse signal at the first end of the conductor based at least in part upon reception of the pulse signal; measuring a number of pulse signals generated within a unit of time; comparing the measured number of pulse signals with a stored table; and determining the flexing of the component based at least in part on the comparison." The amendments to claim 14 find support throughout the originally filed specification, including in previously presented claim 14. Although it is respectfully submitted that claim 14 as previously pending was also allowable over Rebsdorf and Yanagida, claim 14 has been amended for clarification purposes. Rebsdorf, alone or in combination with Yanagida, fails to disclose, teach or suggest the acts of claim 14.

The Examiner has not cited to any portions of Rebsdorf or Yanagida that might read on the above limitations of amended claim 14. Moreover, it is submitted that Rebsdorf and Yanagida fail to disclose, teach or suggest such limitations. For at least these reasons, it is respectfully submitted that the rejection of claim 14 over Rebsdorf and Yanagida should be withdrawn.

Amended independent claim 15 recites, *inter alia*, "a signal generator coupled to a first end of [a] conductor and configured to generate a pulse signal thereon; a reflector coupled to

a second end of the conductor and configured to reflect the pulse signal back to the first end of the conductor; and a signal receiver coupled to the first end of the conductor and to the signal generator, the signal receiver configured to receive the reflected pulse signal and to cause the signal generator to generate an additional pulse signal based at least in part upon reception of the reflected pulse signal, a time between the reception of the reflected pulse signal and the generation of the additional pulse signal being substantially constant.” The amendments to claim 15 find support throughout the originally filed specification, including in previously presented claim 15. Although it is respectfully submitted that claim 15 as previously pending was also allowable over Rebsdorf and Yanagida, claim 15 has been amended for clarification purposes. Rebsdorf, alone or in combination with Yanagida, fails to disclose, teach or suggest the claimed elements of claim 15.

The Examiner has not cited to any portions of Rebsdorf or Yanagida that might read on the above limitations of amended claim 15. Moreover, it is submitted that Rebsdorf and Yanagida fail to disclose, teach or suggest such limitations. For at least these reasons, it is respectfully submitted that the rejection of claim 15 over Rebsdorf and Yanagida should be withdrawn.

Amended claim 20 recites, *inter alia*, “a conductor extending longitudinally from adjacent the first end of the blade a predetermined distance along the length of the blade toward the blade tip and back to adjacent the first end of the blade.” (Emphasis added.) The amendments to claim 20 find support throughout the originally filed specification, including in previously presented claim 21. Although it is respectfully submitted that claim 20 as previously pending was also allowable over Rebsdorf and Yanagida, claim 20 has been amended to expedite prosecution. Rebsdorf, alone or in combination with Yanagida, fails to disclose, teach or suggest the claimed conductor.

As discussed above with respect to claim 1, it is respectfully submitted that neither Rebsdorf nor Yanagida discloses, teaches or suggests a conductor that extends from adjacent a first end of a blade toward a blade tip and back to adjacent the first end of the blade. Instead, as illustrated in Figure 13 of Yanagida, the strain gauges 3 extend in one direction only, with respective terminals 4 at innermost and outermost ends of the strain gauges 3 along the

wing bodies 23. For at least these reasons, it is respectfully submitted that the rejection of claim 20 over Rebsdorf and Yanagida should be withdrawn.

Claims 3, 4, 6, 11, 12, 16-19, 22 and 24-29 depend from independent claims 1, 14, 15 and 20, respectively, and are allowable as depending from allowable base claims, as well as for the novel and non-obvious combinations of elements recited therein.

Rejection of Claims 7-10 and 30 under 35 U.S.C. § 103(a)

The Examiner rejected claims 7-10 and 30 under 35 U.S.C. § 103(a) as being unpatentable over Rebsdorf in view of Yanagida and further in view of U.S. patent no. 6,940,186, issued to Weitkamp ("Weitkamp"). Without admitting that Weitkamp is prior art to the above claims, these rejections are respectfully traversed because Rebsdorf, alone or in combination with Yanagida and/or Weitkamp, fails to disclose, teach or suggest all of the elements of the claims. See M.P.E.P. § 2143.03 (stating that all words in a claim must be considered in judging the patentability of that claim against the prior art).

Claims 7-10 are dependent upon claim 1 discussed at length above. Claim 30 is dependent upon claim 20 discussed at length above. Since Weitkamp does not supply any additional teaching that might render independent claims 1 or 20 obvious, claims 7-10 and 30 are allowable as depending from an allowable base claim, as well as for the novel and non-obvious combinations of elements recited therein.

New Claims 32-42

New claims 32-42 have been added and are believed to be fully distinguished over the art of record. In particular, new independent claim 36 recites, *inter alia*, "a first conducting loop extending along the rotor blade from the first end in a direction of the rotor blade tip and back to the first end; a second conducting loop extending along the rotor blade from the first end in a direction of the rotor blade tip and back to the first end; a detector system coupled to the first conducting loop and the second conducting loop and configured to detect a first characteristic of the first conducting loop and a second characteristic of the second conducting loop; and a control system coupled to the detector system and configured to control

the wind power plant based at least in part on a difference between the first characteristic and the second characteristic.” Rebsdorf, alone or in combination with Yanagida and/or Weitkamp, fails to disclose, teach or suggest such claim elements.

Meanwhile, dependent claims 32-33 are dependent upon independent claim 20 discussed at length above. Claims 34 and 35 are dependent upon allowable independent claim 31. Claims 37-42 are dependent upon new independent claim 35. These dependent claims are allowable as depending from an allowable base claim, as well as for the novel and non-obvious combinations of elements recited therein.

CONCLUSION

In light of the above remarks, Applicants submit that pending claims 1, 3, 4, 6-20 and 22-42 are in condition for allowance. Any remarks in support of patentability of one claim should not be imputed to any other claim, even if similar terminology is used. Any remarks referring to only a portion of a claim should not be understood to base patentability on that portion; rather, patentability must rest on each claim taken as a whole. Although changes to the claims have been made, no acquiescence or estoppel is or should be implied thereby; such amendments are made only to expedite prosecution of the present application and are without prejudice to the presentation or assertion, in the future, of claims relating to the same or similar subject matter.

It is respectfully requested that the Examiner reconsider this application and timely allow all pending claims. The Examiner is encouraged to contact Mr. Evans by telephone to discuss the above and any other distinctions between the claims and the applied references, if desired.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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